

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 – 25. (cancelled)

Claim 26. (previously presented) A freeze control system for a spa, wherein the spa is surrounded by ambient air defining ambient air temperature, said freeze control system comprising:

- A. a spa tub containing tub water having a tub water temperature,
- B. spa piping for circulating water to and from said spa tub,
- C. a heating element for producing heated water,
- D. at least one water pump for pumping the heated water,
- E. a covered ambient air temperature sensor for detecting said ambient air temperature near said spa piping and for generating ambient air temperature signals corresponding to said ambient air temperature near said spa piping, and
- F. a computer programmed to control said at least one water pump and to process said ambient air temperature signals,

wherein said computer is programmed to receive said ambient air temperature signals from said ambient air temperature sensor and to start and run said at least one water pump after receiving said ambient air temperature signals, wherein said at least one water pump pumps water through said spa piping so that the temperature of the water inside said spa piping is maintained above freezing level.

Claim 27. (cancelled)

Claim 28. (previously presented) A freeze control system as in Claim 26, wherein said computer comprises computer components and said ambient air temperature sensor is mounted so as to be affected by heat generated by said computer components.

Claim 29. (previously presented) A freeze control system as in Claim 28, wherein said computer programming comprises a correction factor to account for the heat generated by said computer components.

Claim 30. (previously presented) A freeze control system as in Claim 26, wherein said computer is programmed to start and run said at least one water pump for a predetermined period of time at intervals based on said ambient air temperature signals.

Claim 31. (previously presented) A freeze control system as in Claim 30, wherein said predetermined period of time is one minute.

Claim 32. (previously presented) A freeze control system for a spa, wherein the spa is surrounded by ambient air defining ambient air temperature, said freeze control system comprising:

- A. a spa tub containing tub water having a tub water temperature,
- B. spa piping for circulating water to and from said spa tub,
- C. a heating element for producing heated water,
- D. at least one air blower for blowing air into said spa tub,
- E. at least one water pump for pumping the heated water,
- F. a covered ambient air temperature sensor for detecting said ambient air temperature near said spa piping and for generating ambient air temperature signals corresponding to said ambient air temperature near said spa piping, and
- G. a computer programmed to control said at least one water pump and to process said ambient air temperature signals

wherein said computer is programmed to receive said ambient air temperature signals from said ambient air temperature sensor and to start and run said at least one water pump after receiving said ambient air temperature signals, wherein said

at least one water pump pumps water through said spa piping so that the temperature of the water inside said spa piping is maintained above freezing level.

Claim 33. (cancelled)

Claim 34. (previously presented) A freeze control system as in Claim 32, wherein said computer comprises computer components and said ambient air temperature sensor is mounted so as to be affected by heat generated by said computer components.

Claim 35. (previously presented) A freeze control system as in Claim 34, wherein said computer programming comprises a correction factor to account for the heat generated by said computer components.

Claim 36. (previously presented) A freeze control system as in Claim 32, wherein said computer is programmed to start and run said at least one water pump and said at least one blower for a predetermined period of time at intervals based on said ambient air temperature signals.

Claim 37. (previously presented) A freeze control system as in Claim 36, wherein said predetermined period of time is approximately one minute.

Claim 38. (cancelled)

Claim 39. (previously presented) A freeze control system as in Claim 26, further comprising a tub water temperature sensor for detecting said tub water temperature and for generating tub water temperature signals, wherein said computer is further programmed to receive said tub water temperature signals and to start and run said at least one water pump after receiving said tub water temperature signals, wherein said at least one water pump pumps heated water into said spa tub.

Claim 40. (previously presented) A freeze control system for a spa, wherein the spa is surrounded by ambient air defining ambient air temperature, said freeze control system comprising:

- A. a spa tub containing tub water having a tub water temperature,
- B. spa piping for circulating water to and from said spa tub,
- C. a heating element for producing heated water,
- D. at least one water pump for pumping the heated water,
- E. a first sensor for detecting said tub water temperature,
- F. a covered second sensor for detecting said ambient air temperature near said spa piping, and

G. a computer programmed to control said at least one water pump and to process signals generated by said first sensor and said second sensor,

wherein said computer is programmed to receive ambient air temperature input from said second sensor and to start and run said at least one water pump after receiving said ambient air temperature input, wherein said at least one water pump pumps water through said spa tub and said spa piping so that the temperature of the water inside said spa tub and said spa piping is maintained above freezing level.

Claim 41. (previously presented) The freeze control system as in Claim 26, wherein said ambient air temperature sensor is covered to avoid sensing radiant energy generated by the sun.